

IOP Electrostatics 2023

4-7 September 2023

Brunel University, London



Organised by IOP Dielectrics and Electrostatics Group

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IOP Institute of Physics

Introduction

Electrostatics 2023 is organised by the Dielectrics & Electrostatics Group of the Institute of Physics and continues the International Conference series on Electrostatics which takes place in the United Kingdom every four years. The 2023 conference will be held at Brunel University London.

Brunel was founded as a university in 1966, but its history can be traced back through its predecessor colleges to 1798. The university is named after the famous engineer Isambard Kingdom Brunel (1806–1859), one of the great British engineers of the 19th century. Isambard was born into an industrious family in 1806, with his mother Sophia Kingdom working for the Royal Navy and father Marc Brunel being a prominent French engineer. Isambard took on formal training as an engineer and went on to build twenty-five railway lines, over a hundred bridges, including five suspension bridges, eight pier and dock systems, three ships and a pre-fabricated army field hospital. To add to this, he was a keen social engineer, building housing estates, churches and hospitals.

Brunel University London has always been a front runner in engineering research in the UK. The Centre for Electronic System Research (CESR), a world-renowned centre led by Professor Balachandran, has secured many research grants for varied applications. Over the past two decades, the centre has pursued extensive research in charge particle dynamics, electrostatic sprays, bipolar charge measurement systems, electro-hydrodynamics, and electrospinning. Furthermore, the group has developed retrofittable non-thermal plasma systems using microwaves and dielectric barrier discharge techniques for the abatement of diesel exhaust emissions of marine vessels and chimney stack emissions. The centre's expertise extends to using electrostatics sprays in agricultural pest control, smog and dust cloud suppression. The group has participated with major pharmaceutical companies to address the drug particle charging and control mechanisms in metered-dose inhalers, nebulisers, and dry powder inhalers.

The Electrostatics conference series was started with a desire to understand the fundamentals of electrostatic charging, and to explain and control electrostatic phenomena found in industry. There is still much research in these areas, which always form a welcome part of the conference. Electrostatic phenomena in our environment and in environments beyond our planet are the subjects of fascinating and globally important research. The application of electrostatics in the development of new materials and new methods of fabrication is equally exciting. So too are the many applications in biology and medicine, environmental and agricultural protection and energy generation.

Electrostatics 2023 will provide the perfect forum for scientists and engineers from around the world to meet and discuss advances in all these areas. Whether professor or student, industry leader or factory engineer, Electrostatics 2023 warmly welcomes all.

International Advisory Group

- Prof. G. S. P. Castle
(University of Western Ontario, Canada)
- Prof. L. Dascalescu
(University of Poitiers, France)
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(Shanghai Maritime University, China)
- Mr. D. E. Swenson
(Affinity Static Control Consulting LLC, USA)

Subject Areas

- Atmospheric electricity
- Bioelectrostatics
- Biological applications
- Dielectrophoresis
- Electrohydrodynamics
- ESD
- Electrostatics in combustion
- Electrostatic effects in drug delivery
- Electrostatic microencapsulation
- Electrostatic precipitation
- Electrospinning
- Electrowetting-based microfluidics
- Energy generation/harvesting/storage
- Environmental electrostatics
- Health effects
- History of electrostatics
- Ionisation and charge control
- Liquids
- Measurements
- MEMS
- Moving webs and belts
- Nanoelectrostatics
- Nanoelectrospray
- Nanofibres
- Nanoparticle orientation
- Numerical modelling
- Nonthermal plasmas
- Particle control and transport
- Planetary & exoplanetary electrostatics
- Powders
- Safety and hazards
- Standards
- Teaching electrostatics
- Textiles
- Triboelectrification

Key dates

Abstract submission deadline	28 April 2023
Paper submission deadline	7 July 2023
Early registration deadline	28 July 2023
Registration deadline	25 August 2023

Co-operation Partners

Electrostatics Committee of
Chinese Physical Society



EOS/ESD Association



Electrostatics Society of America



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